2011 Leading by Example Awards

Presented by the Commonwealth of Massachusetts

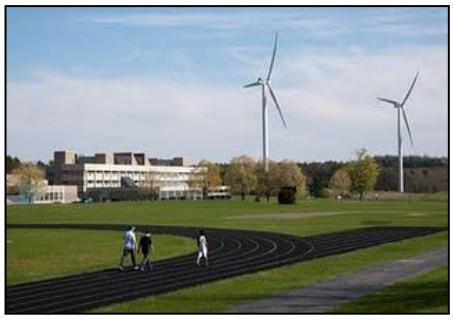
The **Leading by Example Awards** *recognize outstanding efforts among Commonwealth agencies, public higher education institutions, municipalities, and individuals that have established and implemented policies and programs resulting in significant and demonstrable energy and environmental benefits.*

STATE AGENCIES

The **Massachusetts Water Resource Authority (MWRA)** delivers 215 million gallons of drinking water and treats 350 million gallons of wastewater a day for 2.5 million people across 61 Massachusetts communities. The MWRA has made significant investments in clean energy and energy efficiency - including wind, solar, hydro, methane, lighting improvements, and clean vehicle investments. All told, the MWRA's on-site renewable generation produces approximately 63 million kWh per year, reducing MWRA's utility bills by millions of dollars as well as generating over $2 million in revenue through the sale of renewable energy certificates and participation in the demand response program.

The **Chelsea Soldiers' Home**, a multifaceted health care facility for eligible Massachusetts veterans that originally opened in 1882, has invested in several energy efficiency, renewable energy, and sustainable procurement efforts. The Soldiers' Home installed a new $1.2 million roof on their largest campus building, a 60 kW solar PV installation, daylighting controls for hallways, and replaced older lights with high efficiency lighting systems. All told, improvements will reduce electricity usage by 150,000 kWh a year and save $24,000 annually. In addition, the Solders' Home has converted all floor care, general, and restroom cleaners, and hand sanitizers to environmentally preferable alternatives.

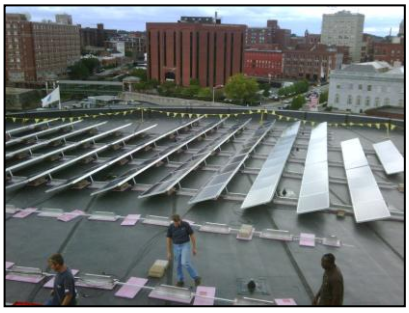
PUBLIC HIGHER EDUCATION



Mount Wachusett Community College (MWCC) has achieved a 48 percent reduction in greenhouse gas emissions from the 2002-04 baselines, which makes MWCC the largest greenhouse gas reducer of any state college, university, or agency. MWCC has made investments in biomass, a 100 kilowatt solar PV installation, solar hot water systems, and two 1.65 megawatt wind turbines on their campus, and as a result MWCC is expecting clean energy to generate 97% of their annual electricity demand. Overall, these efforts have resulted in a 4.2 million kWh reduction in the use of grid generated electricity since FY2002, a 52% reduction— equivalent to the electricity use of some 700 homes annually.

Massasoit Community College (MCC) is undergoing a three phase comprehensive energy efficiency project that includes the installation of high-efficiency lighting, water conservation measures, weatherization, new HVAC roof-top units, boiler controls, an energy management system and several other measures. Over the 20 years, the three phase project is expected to result in more than a 35% reduction in energy use and decrease energy utility bills by $12 million a year. In addition, MCC recently celebrated the installation of a multi-building 370 kW solar panel installation – an installation that will produce over 450,000 kWh of clean, renewable electricity and save up to $60,000 annually in energy costs for the college.

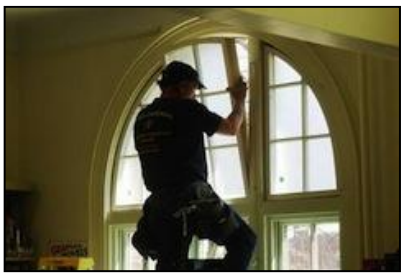
MUNICIPALITIES



The **City of Lowell**, the fourth largest city in the Commonwealth and a DOER designated Green Community, is leveraging over $1 million in utility rebates as well as $250,000 from the American Recovery and Reinvestment Act to partner with Ameresco to implement a comprehensive $21 million performance contract and power purchase agreement. The comprehensive performance contract is being implemented across 47 city-owned buildings, nearly 3 million square feet of building space, including schools and city facilities. These projects include a 341 kW solar PV array, electricity conservation measures, mechanical improvements, and the weatherization of buildings. All told the $21 million project will pay for itself out of savings in 20 years.

The **City of Boston's** innovative and nation-leading LED Streetlight program has created a model for municipalities across the country. Boston has over 60,000 streetlights, with an annual energy use of 65 million kWh at a cost of $7 million per year. To reduce these costs, Boston's Public Works Department undertook an effort to test and install more efficient LED streetlights, which have a longer lifetime and reduce energy consumption by up to 60 percent. Over 18,000 LED lights will be installed by the end of 2011 which will lead to an annual savings of $1.8 million in utility costs and an 11% reduction in municipal greenhouse gas emissions. The City of Boston is a DOER designated Green Community and has committed to reducing Boston's community emissions by 25 percent by 2020 and municipal emissions by 20 percent by 2014.

The **Town of Hudson**, a suburban community with a population of fewer than 20,000, has made a significant commitment to both clean energy and sustainability. Hudson is home to several historic buildings that the town uses for many of its facilities. While these buildings are historically rich, they are often inefficient and difficult to heat and cool in the changing New England seasons. Hudson took these challenges head-on by completing several efficiency projects, including utilizing funds from the American Recovery and Reinvestment Act of 2009 to complete a window retrofit at their public library. Hudson replaced 117 deteriorated, historic windows with high performance, energy efficient windows and 27 new solar shades that are projected to reduce fuel consumption and electricity usage by 40 percent and save the town over $7,000 a year.



The **Town of Easton** was named a Green Community in the summer of 2011 and has been dedicated to sustainability in government for over two decades. Easton has taken several steps towards these goals, including installing a 50 kW solar PV system, new energy efficient boilers at their Department of Public Works and a Fire Station, implementing lighting system upgrades at two schools and several municipal buildings, and since 2007 has been tracking energy usage at municipal buildings and schools to make informed energy decisions. Moreover, Easton is a leader working with the community around recycling and hazardous waste and has made significant efforts to educate community members about sustainability issues.

INDIVIDUALS

Melissa Lucas, the Sustainability and Energy Manager at the University of Massachusetts Medical School is recognized for her work including developing a "Growing Green' website, a "Growing Green" newsletter which is distributed to over 10,000 people across the University of Massachusetts system, creating a mechanism for tracking projects and sharing best practices around sustainability projects. She has also overseen several efforts to make both existing and new buildings energy efficient and more sustainable, including the opening of a new green and energy efficient data center, lighting upgrades to the loading dock and parking garage, domestic hot water system upgrades, installation of efficient lighting and control system in the Integrated Teaching and Learning Center, upgrades to the power plant boilers, and the construction of a new Ambulatory Care Center that was designed to receive a LEED Silver level. Thanks to Melissa's leadership, despite an 18% growth in campus square footage from 2002 to 2010, UMass Medical School has managed to reduce its oil use by almost half.

Chris Mason, the City of Northampton's Energy and Sustainability Officer is awarded for his work implementing a $6.5 million citywide performance contract with Con Edison that will reduce energy use within municipal operations by 26% and reduce energy bills by $454,000 per year. In addition, Chris is recognized for coordinating Northampton's adoption of the Stretch Energy Code and successful application to the DOER to become a Green Community - one of the first cities to receive such a designation - and his work implementing the Sustainable Northampton Plan, which aims to increase the use of renewable energy, upgrade city buildings to become highly efficient, expand bike and pedestrian pathways, improve traffic flow, eliminate idling of diesel vehicles, reduce overall greenhouse gas emissions, increase community energy-literacy, and support private-sector energy upgrade efforts.

The Massachusetts Department of Energy Resources (DOER) develops and implements policies and programs aimed at ensuring the adequacy, security, diversity, and cost-effectiveness of the Commonwealth's energy supply within the context of creating a cleaner energy future.

Creating a Cleaner Energy Future for the Commonwealth